

**Amendments to the Claims:**

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Original) Lubricant base oil consisting essentially of a normal paraffin and an isoparaffin, and satisfying the following requirements (a) and (b):

(a) an average carbon number  $N_c$  in one molecule is not less than 28 but not more than 40; and

(b) an average branch number  $N_b$  in one molecule, which is derived from a ratio of  $\text{CH}_3$  carbon to total carbon determined by  $^{13}\text{C}$ -NMR analysis and the average carbon number  $N_c$  in one molecule is not more than  $(0.2N_c - 3.1)$  but not less than 1.5.

2. (Original) Lubricant base oil according to claim 1, which is obtained from an isomerization of a starting straight-chain hydrocarbon material having an average carbon number  $N_c$  in one molecule of not less than 25.

3. (Original) Lubricant base oil according to claim 2, wherein the starting straight-chain hydrocarbon material is a Fischer-Tropsch synthetic wax.

4. (Original) A method of producing lubricant base oil according to claim 3, which comprises subjecting starting oil composed of a Fischer-Tropsch synthetic wax having a 10% distillation temperature of not lower than  $360^\circ\text{C}$  to an isomerization under a condition that a decreasing ratio of a fraction having a boiling point of not lower than  $360^\circ\text{C}$  is not more than 40% by weight.

5. (Currently Amended) A method of producing lubricant base oil according to ~~any one of claims 1 to 3~~claim 1, which comprises the following steps:

- (1) hydroisomerizing a starting straight-chain hydrocarbon material in a first reactor;
- (2) separating oil obtained by the hydroisomerization into a fraction mainly composed of a normal paraffin (fraction  $\alpha$ ) and a fraction mainly composed of an isoparaffin (fraction  $\beta$ );
- (3) hydroisomerizing the fraction  $\alpha$  in a second reactor, and mixing oil obtained from the hydroisomerization (fraction  $\gamma$ ) with the fraction  $\beta$ .

6. (Original) A method according to claim 5, wherein the hydroisomerization in the second reactor is carried out under a reaction condition that a decreasing ratio of a fraction having a boiling point of not lower than 360°C in the hydroisomerization at the second reactor is lower than a decreasing ratio of a fraction having a boiling point of not lower than 360°C in the hydroisomerization at the first reactor.

7. (Original) A method according to claim 5, wherein the starting straight-chain hydrocarbon material is a Fischer-Tropsch synthetic wax.

8. (Original) A method according to claim 7, wherein the Fischer-Tropsch synthetic wax has an average carbon number  $N_c$  of not less than 25.

9. (Original) A method according to claim 5, wherein the hydroisomerization in the first reactor is carried out under a reaction condition that a decreasing ratio of a fraction having a boiling point of not lower than 360°C is not more than 50% by weight.

10. (New) A method of producing lubricant base oil according to claim 2, which comprises the following steps:

- (1) hydroisomerizing a starting straight-chain hydrocarbon material in a first reactor;
- (2) separating oil obtained by the hydroisomerization into a fraction mainly composed of a normal paraffin (fraction  $\alpha$ ) and a fraction mainly composed of an isoparaffin (fraction  $\beta$ );
- (3) hydroisomerizing the fraction  $\alpha$  in a second reactor, and mixing oil obtained from the hydroisomerization (fraction  $\gamma$ ) with the fraction  $\beta$ .

11. (New) A method of producing lubricant base oil according to claim 3, which comprises the following steps:

- (1) hydroisomerizing a starting straight-chain hydrocarbon material in a first reactor;
- (2) separating oil obtained by the hydroisomerization into a fraction mainly composed of a normal paraffin (fraction  $\alpha$ ) and a fraction mainly composed of an isoparaffin (fraction  $\beta$ );
- (3) hydroisomerizing the fraction  $\alpha$  in a second reactor, and mixing oil obtained from the hydroisomerization (fraction  $\gamma$ ) with the fraction  $\beta$ .

12. (New) A method according to claim 10, wherein the hydroisomerization in the second reactor is carried out under a reaction condition that a decreasing ratio of a fraction having a boiling point of not lower than 360°C in the hydroisomerization at the second reactor is lower than a decreasing ratio of a fraction having a boiling point of not lower than 360°C in the hydroisomerization at the first reactor.

13. (New) A method according to claim 11, wherein the hydroisomerization in the second reactor is carried out under a reaction condition that a decreasing ratio of a fraction having a boiling point of not lower than 360°C in the hydroisomerization at the second reactor is lower than a decreasing ratio of a fraction having a boiling point of not lower than 360°C in the hydroisomerization at the first reactor.

14. (New) A method according to claim 10, wherein the starting straight-chain hydrocarbon material is a Fischer-Tropsch synthetic wax.

15. (New) A method according to claim 11, wherein the starting straight-chain hydrocarbon material is a Fischer-Tropsch synthetic wax.

16. (New) A method according to claim 14, wherein the Fischer-Tropsch synthetic wax has an average carbon number  $N_c$  of not less than 25.

17. (New) A method according to claim 15, wherein the Fischer-Tropsch synthetic wax has an average carbon number  $N_c$  of not less than 25.

18. (New) A method according to claim 10, wherein the hydroisomerization in the first reactor is carried out under a reaction condition that a decreasing ratio of a fraction having a boiling point of not lower than 360°C is not more than 50% by weight.

19. (New) A method according to claim 11, wherein the hydroisomerization in the first reactor is carried out under a reaction condition that a decreasing ratio of a fraction having a boiling point of not lower than 360°C is not more than 50% by weight.